§ 45.69 Correction for bow height.

(a) The minimum summer freeboard of all manned vessels must be increased by the same amount in inches as any deficiency which may be shown by the following formulas:

(1) For vessels having a length of not less than 79 feet and not greater than 550 feet,

0.593 L (1.0–L/1640) inches—actual bow height

(2) For vessels having a length greater than 550 feet,

(341.6—0.227 L) inches—actual bow height

(b) Where the bow height is obtained by sheer, the sheer must extend for at least 15 percent of the length of the vessel measured from the forward perpendicular.

(c) Where the bow height is obtained by a superstructure, the superstructure must be enclosed and extend from the stem to a point at least 0.06 L abaft the forward perpendicular.

(d) Vessels which, to suit exceptional operational requirements, cannot meet the requirements of paragraph (c) of this section may be given special consideration by the Commandant.

(e) The bow height is defined as the vertical distance at the forward perpendicular between the waterline corresponding to the assigned summer freeboard at the designed trim and the top of the exposed deck at side.

§ 45.71 Midsummer freeboard.

The minimum midsummer freeboard (fms) in inches is obtained by the formula:

$$fms = f(s) - 0.3Ts$$

where:
  $f(s)$=summer freeboard in inches
  Ts=distance in feet between top of keel and the summer load line.

§ 45.73 Winter freeboard.

The minimum winter freeboard (fw) in inches is obtained by the formula:

$$fw = f(s) + T \text{ s } (200)/L$$

where:
  L=length L in feet but not less than 400 feet.

§ 45.75 Intermediate freeboard.

The minimum intermediate freeboard (f_I) in inches is obtained by the formula:

$$f_I = f(s) + T \text{ s}(100)/L$$

where:
  L=length L in feet but not less than 400 feet.

§ 45.77 Salt water freeboard.

(a) The salt water addition in inches to freeboard applicable to each fresh water mark is obtained by the formula:

$$\text{Addition} = \Delta/41T$$

where:
  Δ=displacement in fresh water, in tons of 2,240 pounds, at the summer load waterline.
  T=tons per inch immersion, of 2,240 pounds, in fresh water at the summer load waterline.

(b) When the displacement at the summer load waterline cannot be certified, the addition in inches to the minimum freeboard in fresh water may be obtained by multiplying 0.25 by the summer draught in feet measured from the top of the keel to the center of the load line diamond.

Subpart D—Conditions of Assignment

§ 45.101 Purpose.

This subpart prescribes conditions that a vessel must meet to be eligible for assignment of a loadline under this part.

§ 45.103 Structural stress and stability.

(a) The nature and stowage of the cargo, ballast, and other variable weights must be such as to make the vessel stable and avoid unacceptable structural stress.

(b) The vessel must meet all applicable stability and subdivision requirements of this chapter.

§ 45.105 Information supplied to the master.

Unless otherwise authorized by the Commandant, the vessel must have onboard, in a form approved by the Commandant, sufficient information.

(a) To enable the master to load and ballast the vessel in a manner that